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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,143	01/18/2002	Kunihiro Oka	33737W013	3844

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WASHINGTON, DC 20036

EXAMINER
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WILLIAMS, THOMAS J

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/050,143

Applicant(s)

OKA ET AL.

Examiner

Thomas J. Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 May 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Acknowledgment is made in the receipt of the priority claim and preliminary amendment filed January 18, 2002, the information disclosure statement filed April 15, 2002, and the election filed May 29, 2003.
2. The election of species required in the Office action mailed April 28, 2003 is hereby withdrawn.

### ***Specification***

3. The abstract of the disclosure is objected to because the length exceeds 250 words. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,482,127 to Eda et al.

Re-claim 1, Eda et al. discloses a joint for integrally rotatably connecting a rotating shaft to an output shaft of an electric motor comprising: a first transmission member 231 mounted on the output shaft 102a; a second transmission member 233 encloses the first transmission member via a gap therebetween, the second transmission member is connected with the rotating shaft 103; an elastic body 232 is interposed between the first and second transmission members for transmission of the rotation of the first transmission member to the second transmission member.

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Re-claim 2, the first transmission member, the second transmission member, and the elastic member comprise cylindrical bodies.

Re-claim 3, a flat face on an outer periphery of the first transmission member is in opposed relationship to a flat face on an inner periphery of the second transmission member.

Re-claims 9, 11 and 12, Eda et al. discloses a steering assist system 100 for providing steering assist from an electric motor 102 to a steering shaft 111 via a worm shaft 103a, a rotating shaft formed with a worm, and a worm wheel 104 is meshed with the worm of the worm shaft 103a, wherein the output shaft 102a of the electric motor 102 and the worm shaft 103a are interconnected via the joint.

Re-claim 10, the worm shaft 103a is supported and biased towards the worm wheel 104 by support bearing elements.

6. Claims 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2,586,293 to Birkigt.

Re-claim 4, Birkigt discloses a joint, comprising: a first transmission member 4 mounted on an output shaft 2; as second transmission member 13 enclosing the first transmission member; an elastic body 12 is interposed between the first and second transmission members; a third transmission member 14 is integrally rotatable with a rotating shaft 6; a torque limiter (interpreted as spring 15) inhibits relative rotation between the second transmission member 13 and the third transmission member 14 and will permit relative rotation therebetween when a rotational resistance between the second and third transmission member exceeds a predetermined value, column 2 lines 21-25.

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Re-claim 5, the friction face of transmission member 14 is interpreted as a lock member locked to the transmission member, a spring 15 imparts frictional resistance to a contact surface between the second transmission member and the lock member.

Re-claim 6, the spring 15 is interposed between the second transmission member and a spring seat 16.

Re-claim 7, the first transmission member, second transmission member, elastic body, and third transmission member are cylindrical.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Birkigt in view of US 4,327,562 to Gottschalk.

Birkigt fails to teach flat surfaces in opposed relationship between an outer periphery of the first transmission member and an inner periphery of the second transmission member. Gottschalk teaches an elastic coupling interposed between a first and second transmission member, wherein the outer periphery of the first transmission member has flat surfaces in opposed relationship to flat surfaces on an inner periphery of the second transmission member, thus providing a positive rotational connection. It would have been obvious to one of ordinary skill in the art to have provided the first and second transmission members of Birkigt with opposed flat surfaces at an outer periphery and at an inner periphery as taught by Gottschalk, thus improving the overall connection between the two transmission members.

10. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birkigt in view of Eda et al.

Re-claims 13-16, Birkigt fails to teach the elastic joint utilized in combination with a steering assist system. Eda et al. teaches a steering assist system with an elastic coupling or joint. It would have been obvious to one of ordinary skill in the art to have utilized the elastic joint of Birkigt in a steering assist system as taught by Eda et al., thus providing both torque limiting and shock absorbing features in a steering assist system.

11. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Birkigt in view of Gottschalk and in view of Eda et al.

Re-claim 17, Birkigt as modified by Gottschalk fails to teach the elastic joint utilized in combination with a steering assist system. Eda et al. teaches a steering assist system with an elastic coupling or joint. It would have been obvious to one of ordinary skill in the art to have

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utilized the elastic joint of Birkigt in a steering assist system as taught by Eda et al., thus providing both torque limiting and shock absorbing features in a steering assist system.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Portmann teaches a torque limiter between two transmission members. Huck teaches an elastic body between two transmission members.

Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is (703) 305-1346. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder, can be reached at (703) 308-3421. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

TJW

July 16, 2003

**THOMAS WILLIAMS  
PATENT EXAMINER**

*Thomas Williams*

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7-16-03